Fillmore Bridge
Spanning the Genesee River at County Road 4
Fillmore Vicinity
Allegany County
New York

HAER No. NY-140

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PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

HISTORIC AMERICAN ENGINEERING RECORD
MID-ATLANTIC REGION NATIONAL PARK SERVICE
DEPARTMENT OF THE INTERIOR
PHILADELPHIA, PENNSYLVANIA 19106

HISTORIC AMERICAN ENGINEERING RECORD

Fillmore Bridge

HAER No. NY-140

Location:	Spanning the Genesee River at County Road 4, Village of Fillmore, Allegany County, New York UTM Coordinates: 17.738140.4705100
Date of Construction:	Lenticular truss, ca. 1878; two Pratt trusses built in 1902. Major rehabilitation, ca. 1950.
Present Owner:	Allegany County Highway Department Belmont, New York
Present Use:	Vehicular bridge
Significance:	One of the last remaining lenticular truss bridges in the northeastern United States. The bridge is a pin-connected through lenticular truss built by the Berlin Bridge Company of East Berlin, Connecticut.
Project Informatgin:	Replacement of the Fillmore Bridge is to be funded by the Federal Highway Administration. Under Section 106 of the National Historic Preservation Act of 1966, mitigative documentation was undertaken by Mark Aldenderfer, Ph.D. in May 1981.
Transmitted by:	Jean P. Yearby, HAER, 1985

SITE DESCRIPTION

The Fillmore Bridge spans the Genesee River just beyond the village limits of Fillmore. The bridge is oriented on a northwest-southeast axis in largely open farmland. The Genesee River has been the major force in altering the landscape since the bridge was built. In 1902, the river flooded, carving out a new channel to the east of the original span which necessitated the addition of two bridge spans. The river has continued to act on the landscape with periodic flooding.

HISTORICAL CONTEXT

The Fillmore Bridge was built at a time of farm market expansion and economic growth in northern Allegany County. Following the demise of the Genesee Valley Canal in 1878, the region needed more reliable transortation routes to get farm products to market.[1] A continual hindrance to travel was the Genesee River, an active, busy river which continually reshaped the landscape. Prior to the construction of the Fillmore Bridge, bridges which crossed the Genesee at this point were built of wood, and proved to be very vulnerable to the flooding caused by the river. The Fillmore Bridge was constructed as a more permanent solution to the transportation problems of the region.

Nothing is known or recorded on why the lenticular truss was chosen, who the actual supplier of the raw materials for the bridge was, or information on the details of the construction process. However, some information on the details of the company which erected the bridge is available. The structure was constructed by the Berlin Iron Bridge Company of East Berlin, Connecticut. Prior to 1883, this company was named the Corrugated Metal Company of the same date. The Berlin Iron Bridge Company specialized in the construction of lenticular trusses. Its principal agent in New York held two patents on the lenticular truss style: one issued in 1878 and the other in 1885. According to a now-missing nameplate on the bridge, which names the Corrugated Metal Company as the builder, the structure could have been constructed in the period 1878-1885, with 1878 as the most likely date of construction, because the nameplate clearly specified that the Douglas patent on the lenticular truss style was pending.[2]

The lenticular truss spanned the width of the Genesee River until ca. 1902, when a major flood cut a new channel behind the easternmost pier. To span the river, two through Pratt trusses were erected.

Major additions took place during the 1950s: plates were welded onto all vertical members of the bridge; the top cross bracing of the original structure was riveted, but replaced with welded beams; new stringers were added, and a fabricated steel curb was placed on both the north and south sides of the bridge. The easternmost original pier has been continually reinforced with concrete because of serious ice spalling.

Aside from these renovations, the bridge remains more or less intact, and is apparently one of few remaining lenticular truss bridges in the northeastern United States.[2] [3]

BRIDGE DESCRIPTION

The Fillmore Bridge is a combination of three spans: a lenticular through truss and two through Pratt trusses. The lenticular truss has been erected upon two piers of cut sandstone blocks. The easternmost pier has been reinforced with concrete, whereas the westernmost pier has been buried with gravel, dirt, and some rip-rap to protect it from damage and also to provide additional support. The sandstone blocks have been mortared, and additional mortar has been added at times in the past.

The curb-to-curb width of the one-lane lenticular truss span is 14.9 feet. It is 70 feet in length. The maximum elevation of the structure (at its midpoint from the deck to the top of the upper chord) is 8.8 feet. The overall length of the span (including the two Pratt trusses) is 426 feet.

The lenticular truss is a pin-connected through truss. The truss members are constructed as follows: the upper chords and end posts are built-up members consisting of channels and cover plates riveted together without lattice bar connections; the lower chord is composed of flat eyebars, and the verticals are built of channels connected by double lattice bars. Both diagonals and counters are loop-welded rods with the counters being adjusted by turn-buckles. The bridge is constructed of wrought iron, but has been modified by the addition of fabricated steel curbs; the original structure (according to the patent) contained fabricated iron cross bracing members across the upper chord. This has been replaced by a set of welded steel cross braces which has seriously spoiled the appearance of the structure.

The lenticular truss is presently in poor structural condition and is deteriorating rapidly. A recent bridge rating inventory has shown that the bridge piers are settling into the banks at a measurable rate. The upper is rippled and warped; the floor stringers are excessively rusted, leading to the separation of the beam flanges from the web; and the tie bars in the web do not have tension, and therefore are not working properly. Although most of the fabric itself (aside from the floor stringers) is not rusted, the bridge is warped, and shows signs that it is not working as originally designed.[3]

SOURCES OF INFORMATION

A. Original Architectural Drawings: No drawings or plans of the Fillmore Bridge were discovered despite considerable effort. The county simply did not request file copies of material. However, William Green, Allegany County Historian, has drafted plans of some of the major remaining original structural features, and these have been included in the report. Similarly, no early drawings or photographs were located.

B. Interviews: There are no living observers of the construction of the bridge; however, William Green interviewed two people: Mr. A. Bennet, a descendant of the original owner of the farm which is at the eastern end of the bridge, and a Mr. Henry Oldenburg, now of Denver, Colorado, once a resident of Fillmore. They both provided some information on local history, but were generally unable to provide detailed information on the bridge

C. Bibliography:

1 1970 Holton, G. R. The Genesee Valley Canal. No publisher.

2 1980 Brink, D. (compiler). Categorical exclusion, draft section 4(f) section 106, PIN 6750.63 Snyder Hill Road (CR 4), Town of Hume, Allegany County. New York State Department of Transportation Project Report.

3 1974 Plowden, D. The Spans of North America.

Other sources:

HAER Inventory, CR #4 Bridge, compiled by T. E. Leary, 11/12/76.

Interview, William Green, Allegany County Historian, 5/28/81.

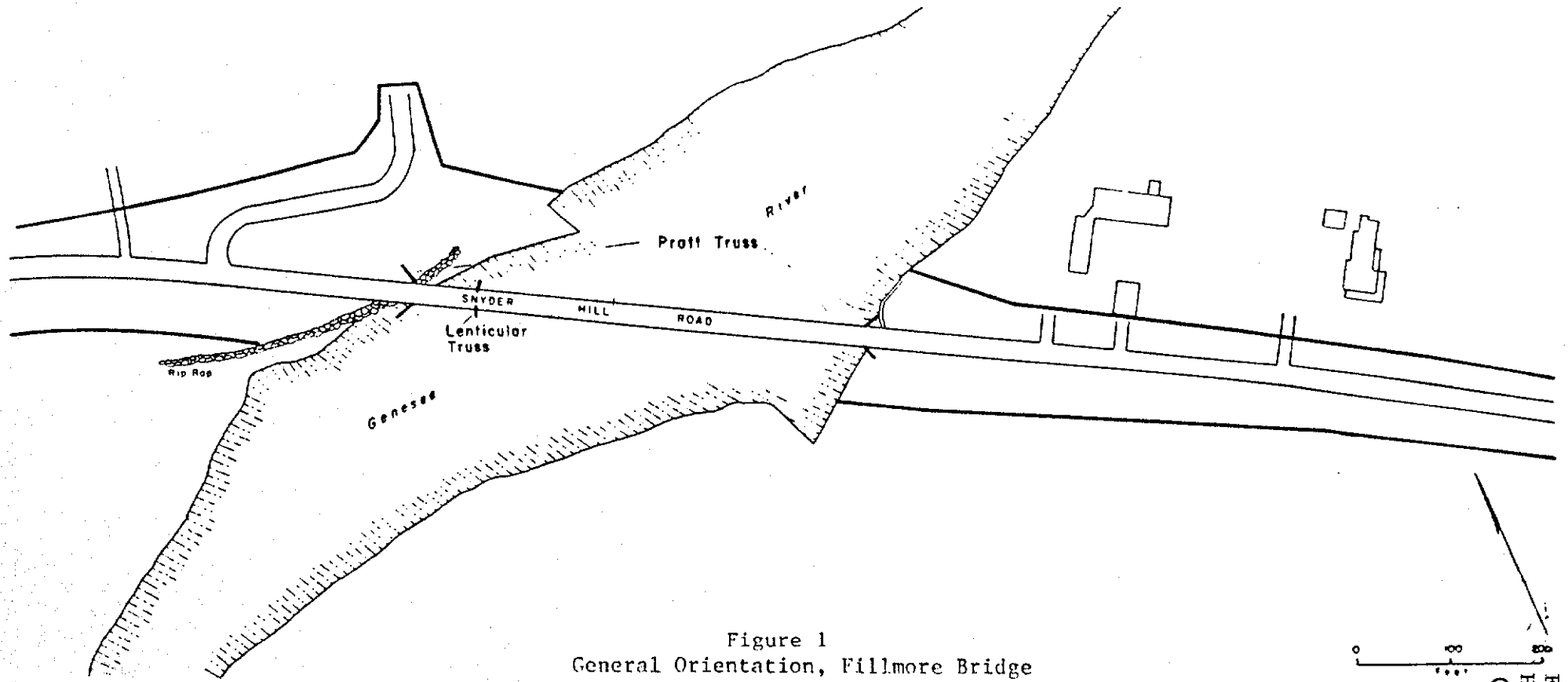

Figure 1
General Orientation, Fillmore Bridge
Allegany County, New York